Air Quality
PERMIT TO CONSTRUCT

State of Idaho
Department of Environmental Quality

PERMIT NO.: P-060325
FACILITY ID No.: 005-00004
AQCR: 61 **CLASS:** A
SIC: 3241 **ZONE:** 12
UTM COORDINATE (km): 397.6 , 4738.6

1. **PERMITTEE**
Ash Grove Cement Co.

2. **PROJECT**
Kiln Dust Handling Systems

3. **MAILING ADDRESS**	**CITY**	**STATE**	**ZIP**
230 Cement Road	Inkom	ID	83245-1543
4. **FACILITY CONTACT** Ron Smith	**TITLE** PLANT MANAGER	**TELEPHONE** (208) 775-3351	
5. **RESPONSIBLE OFFICIAL** Ron Smith	**TITLE** Plant Manager	**TELEPHONE** (208) 775-3351	
6. **EXACT PLANT LOCATION** 230 Cement Road, Inkom		**COUNTY** Bannock	

7. **GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS**
Portland Cement Production

8. **GENERAL CONDITIONS**

This permit is issued according to IDAPA 58.01.01.200, Rules for the Control of Air Pollution in Idaho, and pertains only to emissions of air contaminants regulated by the state of Idaho and to the sources specifically allowed to be constructed or modified by this permit.

This permit (a) does not affect the title of the premises upon which the equipment is to be located; (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (c) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; (d) in no manner implies or suggests that the Department of Environmental Quality (DEQ) or its officers, agents, or employees, assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment.

This permit will expire if construction has not begun within two years of its issue date or if construction is suspended for one year.

This permit has been granted on the basis of design information presented with its application. Changes of design or equipment may require DEQ approval pursuant to the Rules for the Control of Air Pollution in Idaho, IDAPA 58.01.01.200, et seq.

KEN HANNA, PERMIT WRITER
DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE MODIFIED/REVISED:	
DATE ISSUED:	Proposed Draft

MIKE SIMON, STATIONARY SOURCE PROGRAM MANAGER
DEPARTMENT OF ENVIRONMENTAL QUALITY

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Acronyms, Units, And Chemical Nomenclatures

AQCR	Air Quality Control Region
CFR	Code of Federal Regulations
CKD	cement kiln dust
DEQ	Department of Environmental Quality
EPA	Environmental Protection Agency
ESP	electrostatic precipitator
hr	hour(s)
IDAPA	A numbering designation for all administrative rules in Idaho promulgated under the Idaho Administrative Procedures Act
km	kilometers
lb/hr	pound per hour
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PTC	permit to construct
SIP	State Implementation Plan
SIC	Standard Industrial Classification
T/yr	tons per year
yr	year(s)

1. PERMIT SCOPE

Purpose

1.1 This permit is issued as a modification to the November 27, 2002, Tier II operating permit and permit to construct and is not a renewal. The application for a Tier II renewal is currently being processed as a separate permitting action. This permit is a PTC action to modify the requirements for the kiln dust handling systems.

1.2 This permit incorporates and replaces the following permit conditions in the Tier II Operating Permit No. 055-00004, PM_{10} SIP Operating Permit, issued November 27, 2002, and these terms and conditions no longer apply:

- All conditions in Section 15, Cement Kiln Dust Handling

Regulated Sources

1.3 Table 1.1 below lists all sources of emissions that are regulated in this permit.

Table 1.1 SUMMARY OF REGULATED SOURCES

Permit Section(s)	Source Description	Emissions Control(s)
2	Kiln Dust Handling	Enclosures, bin vents

2. KILN DUST HANDLING

2.1 Process Description

The following information in conditions 2.1, 2.2, and 2.3 is a narrative description of the kiln dust handling systems and the associated emission control systems regulated by this permit. This description is for informational purposes only.

The cement kilns produce two dust streams: multiclone dust and cement kiln dust. Multiclone dust is returned to the kilns as feed through the dust scoop systems. Cement kiln dust (CKD) is the dust removed by electrostatic precipitators (ESPs). This dust is higher in alkalis which can have a deleterious affect on cement. For this reason, CKD must at times be removed from the kiln system.

The two kilns are each equipped with multiclones and ESPs to remove dust from the kiln off-gases. Multiclone dust is transported with screw conveyors and elevators to the storage bin for the respective kiln. Kiln 1 and 2 multiclone dust storage bins are ventilated by baghouse #11. Multiclone dust is metered from these bins and returned to the kilns as feed.

CKD is produced from the ESPs and processed through a two silos in series.

(1) CKD silo 1. CKD silo 1 is a storage silo which receives CKD from both kilns by separate pneumatic conveyance systems. CKD is removed from this silo and pneumatically conveyed to CKD silo 2. Emissions from CKD silo 1 are controlled by a bin vent.

(2) CKD silo 2. From CKD Silo 1, the CKD may be pneumatically transferred directly to CKD Silo 2 or blended with cement and then transferred to CKD Silo 2 prior to loadout into trucks and rail cars.

The loadout equipment will provide two options for loading railcars or trucks; loading dry product using a spout with an internal dust collection system (BH14); and using the “DustMaster” wetting system to load wetted CKD (15-20% moisture) into a truck. CKD may also be transported by vehicle to a 2 acre landfill pile

Existing CKD conveying equipment, including screw conveyors, elevators, turbulator (wet paddle mixer) and dust bunkers, will be maintained as backup systems but not normally be used.

2.2 Emission Control Description

Emissions associated with the transfer of multiclone dust from the No. 1 and 2 multiclones to the dust bins are controlled by being enclosed. Emissions associated with kiln 1 and 2 multiclone bins are controlled by a baghouse (BH11).

Emissions associated with the transfer of CKD from the No. 1 and 2 kiln ESPs to CKD silos 1 and 2 are controlled by being enclosed. CKD Silos 1 and 2 use bin vents (fabric filters; BH12, BH13) to control emissions when air is displaced during filling.

Emissions from existing backup systems, which are not normally used, are controlled as follows: CKD emissions from the screw to the elevator, and from the elevator to a second screw are controlled by being enclosed.

2.3 Equipment Specifications

2.3.1 Baghouse No. 11 (BH11)

Manufacturer:	Micro-Pulsaire
Model:	Type 30-8
Equipment No.:	50-1212-000
Grain Loading:	0.01 gr/dscf (guaranteed), PM
Flowrate:	940 dscf

2.3.2 Bin Vent (baghouse) No. 12, CKD Silo 1 (BH12)

Manufacturer:	GE Energy (BHA)
Grain Loading:	0.010 gr/dscf, PM/PM_{10}
Flowrate:	2400 dscf

2.3.1 Bin Vent (baghouse) No. 13, CKD Loadout Silo 2 (BH13)

Manufacturer:	GE Energy (BHA)
Grain Loading:	0.010 gr/dscf, PM/PM_{10}
Flowrate:	1680 dscf

2.3.3 Fabric Filter, CKD Truck Loadout Spout (BH14)

Grain Loading:	0.010 gr/dscf, PM/PM_{10}
Flowrate:	1250 dscf

Emission Limits

2.4 PM and PM_{10} Emission Limits - Baghouse BH11

The PM and PM_{10} emissions from the stack of baghouse BH11 shall not exceed 0.014 grains per dry standard cubic foot (gr/dscf) based on a daily average.

[Draft]

2.5 PM and PM_{10} Emission Limits - CKD Fabric Filters

The PM and PM_{10} emissions from the stacks of BH12, BH13, and BH14 shall each not exceed 0.010 grains per dry standard cubic foot (gr/dscf) based on a daily average.

[Draft]

2.6 CKD Transfer Point Opacity Limit - NSPS

In accordance with 40 CFR 60.62(c), the permittee shall not cause to be discharged into the atmosphere any gases which exhibit 10% opacity, or greater from the following sources: the stacks of baghouses BH11, BH12, BH13, BH14; any screw conveyors associated with the dust scoop system; the dust feed spout (bulk loading systems); and any other conveyor transfer points, and bulk loading and unloading systems used to handle CKD. Opacity shall be determined using the procedures specified in IDAPA 58.01.01.625 (Rules for the Control of Air Pollution in Idaho).

[Draft]

2.7 Fugitive Dust Control Plan - CKD Handling Operations

All reasonable precautions shall be taken to prevent PM from becoming airborne while handling CKD as required in IDAPA 58.01.01.651. In determining what is reasonable, considerations will be given to factors such as the proximity of dust-emitting operations to human habitations and/or activities and atmospheric conditions that might affect the movement of PM. To establish reasonable precautions, the Permittee shall develop, maintain and implement a Fugitive Dust Control Plan for CKD handling operations which identifies potential sources of fugitive dust and which establishes good operating practices for limiting the formation and dispersion of dust from those sources. The approved Fugitive Dust Control Plan is part of the terms and conditions of the permit.

2.7.1 The Fugitive Dust Control Plan (Plan) shall contain, at a minimum, the following information and requirements with regard to CKD handling operations:

1. A general description of the potential sources of fugitive dust from the CKD handling operations.
2. Application of water from a water truck, or a suitable dust suppressant (e.g., magnesium chloride), for control of dust on haul roads and loading areas. The Plan must establish criteria to determine when water and/or dust suppressant must be applied. Water does not need to be applied when the surface is wet (i.e. during/following rainy conditions) or when reduced ambient temperatures may cause the water to freeze. The applicant may choose to use surface improvements to existing roads, such as paving, in lieu of water application where appropriate to control fugitive dust.
3. Procedures for installing and using hoods, fans, fabric filters, or equivalent systems, where practical, to enclose/capture and vent the handling of dusty materials.
4. Procedures for covering, open-bodied trucks transporting materials likely to give rise to airborne dusts, paving roadways, and maintaining them in a clean condition, where practical.
5. Establish procedures for promptly removing earth or other stored material from streets, where practical.
6. Establish procedures to minimize dust formation during conveying operations such as installing sides/covers on conveyors and transfer points, and minimizing material drop heights.
7. Training/orientation of employees about the Fugitive Dust Control Plan procedures.
8. The initial Fugitive Dust Control Plan shall be submitted to DEQ for review and approval no later than 30 days after the issuance date of this permit. After approval of the initial plan, the permittee may update the plan at any time by submitting the proposed changes to DEQ for review and approval. The updated plan shall not become effective until approved by DEQ.
9. When in operation, the permittee shall comply with the provisions in the approved Fugitive Dust Control Plan at all times. Whenever an operating parameter is outside the operating range specified by the plan, the permittee shall take corrective action as expeditiously as practicable to bring the operating parameter back within the operating range.
10. A copy of the Fugitive Dust Control Plan shall remain onsite at all times.

2.7.2 The permittee shall monitor and maintain records of the frequency and the method(s) used (i.e., water, chemical dust suppressants, etc.) to reasonably control fugitive emissions.

2.7.3 The permittee shall maintain records of all fugitive dust complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after receipt of a valid complaint. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

2.7.4 The permittee shall conduct and record periodic inspections of potential sources of fugitive emissions in accordance with Section 2 of the Tier I Operating Permit.

[Draft]

Operating Requirements

2.8 Monitoring Equipment

The permittee shall install, calibrate, maintain, and operate, in accordance with manufacturer specifications and the Dust Collector Maintenance Plan, equipment to continuously measure the pressure differential across each air pollution control device (BH11, BH12, BH13, and BH14).

[Draft]

2.9 Dust Collector Maintenance Plan

Within 60 days after startup of BH12, BH13 and BH14, the permittee shall have revised the Dust Collector Maintenance Plan to incorporate these new CKD baghouses. The Permittee shall operate and maintain all of the CKD baghouses (BH11, BH12, BH13, and BH14) in accordance with the Dust Collector Maintenance Plan. The Dust Collector Maintenance Plan shall describe the procedures that will be followed to comply with PTC General Provision 2 and the air pollution control device requirements contained in this permit. The plan shall remain on site at all times and shall be available to DEQ representatives upon request.

[Draft]

2.10 Pressure Drop Across Air Pollution Control Device

The pressure drop across each air pollution control device (BH11, BH12, BH13, and BH14) shall be maintained within the manufacturer and the Dust Collector Maintenance Plan's specifications. Documentation of both the manufacturer and Dust Collector Maintenance Plan's operating pressure drop specifications for each control device shall remain on site at all times and shall be available to DEQ representatives upon request.

[Draft]

Monitoring and Recordkeeping Requirements

2.11 Baghouse Pressure Drop

The permittee shall record the pressure drop across each baghouse (BH11, BH12, BH13, and BH14) on a weekly basis and visual observations daily. The pressure drop shall be recorded as inches of water ("H_2O), in a log, kept at the facility for the most recent two year period. The log shall be made available to DEQ representatives upon request.

[Draft]

2.12 Initial Performance Test - NSPS

Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility and at such other times as may be required by the Administrator under section 114 of the Act, the permittee shall conduct a performance test as required by 40 CFR 60.8 and 60.62(c), and in accordance with General Provision 6 of this permit and IDAPA 16.01.01.157, to demonstrated compliance with Permit Condition 2.6 of this permit. The affected facilities to be tested include the stacks of baghouses BH12, BH13, and BH14, and all new and modified conveyor transfer points, and bulk loading and unloading systems used to handle CKD.

[Draft]

3. PERMIT TO CONSTRUCT GENERAL PROVISIONS

General Compliance

1. The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the Rules for the Control of Air Pollution in Idaho. The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the Rules for the Control of Air Pollution in Idaho, and the Environmental Protection and Health Act, Idaho Code §39-101, et seq.

[Idaho Code §39-101, et seq.]

2. The permittee shall at all times (except as provided in the Rules for the Control of Air Pollution in Idaho) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

[IDAPA 58.01.01.211, 5/1/94]

3. Nothing in this permit is intended to relieve or exempt the permittee from the responsibility to comply with all applicable local, state, or federal statutes, rules and regulations.

[IDAPA 58.01.01.212.01, 5/1/94]

Inspection and Entry

4. Upon presentation of credentials, the permittee shall allow DEQ or an authorized representative of DEQ to do the following:

   a. Enter upon the permittee's premises where an emissions source is located or emissions related activity is conducted, or where records are kept under conditions of this permit;

   b. Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;

   c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and

   d. As authorized by the Idaho Environmental Protection and Health Act, sample or monitor, at reasonable times, substances or parameters for the purpose of determining or ensuring compliance with this permit or applicable requirements.

[Idaho Code §39-108]

Construction and Operation Notification

5. The permittee shall furnish DEQ written notifications as follows in accordance with IDAPA 58.01.01.211:

   a. A notification of the date of initiation of construction, within five working days after occurrence;

b. A notification of the date of any suspension of construction, if such suspension lasts for one year or more;

c. A notification of the anticipated date of initial start-up of the stationary source or facility not more than sixty days or less than thirty days prior to such date;

d. A notification of the actual date of initial start-up of the stationary source or facility within fifteen days after such date; and

e. A notification of the initial date of achieving the maximum production rate, within five working days after occurrence - production rate and date.

[IDAPA 58.01.01.211, 5/1/94]

Performance Testing

6. If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

   All performance testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, at least 30 days prior to conducting any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any or unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.

   Within 30 days following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The written report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

[IDAPA 58.01.01.157, 4/5/00]

Monitoring and Recordkeeping

7. The permittee shall maintain sufficient records to ensure compliance with all of the terms and conditions of this permit. Records of monitoring information shall include, but not be limited to the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

[IDAPA 58.01.01.211, 5/1/94]

Excess Emissions

8. The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions due to startup, shutdown, scheduled maintenance, safety measures, upsets and breakdowns.

[IDAPA 58.01.01.130-136, 4/5/00]

Certification

9. All documents submitted to DEQ, including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certification shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.

[IDAPA 58.01.01.123, 5/1/94]

False Statements

10. No person shall knowingly make any false statement, representation, or certification in any form, notice, or report required under this permit, or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.125, 3/23/98]

Tampering

11. No person shall knowingly render inaccurate any monitoring device or method required under this permit or any applicable rule or order in force pursuant thereto.

[IDAPA 58.01.01.126, 3/23/98]

Transferability

12. This permit is transferable in accordance with procedures listed in IDAPA 58.01.01.209.06.

[IDAPA 58.01.01.209.06, 4/11/06]

Severability

13. The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.